WHAT IS CLAIMED IS:

1. A silver halide emulsion containing water, dispersion medium and silver halide grains wherein the dispersion medium comprising modified gelatin whose amino group is chemically modified, and the silver halide grains comprising spectrally sensitized silver halide grains each having a multilayer adsorption of dye chromophores on the surface thereof.

2. The silver halide emulsion according to claim 1, wherein a ratio of the modified gelatin to the dispersion medium is 5% or more.

3. The silver halide emulsion according to claim 1, wherein the modified gelatin is gelatin to which one carboxyl group (-COOH group) is introduced when one amino acid group thereof is chemically modified, and a chemical modification ratio of the amino groups of the modified gelatin is 5% to 100%.

4. The silver halide emulsion according to claim 1, wherein a variation coefficient of equivalent circle diameters of all the silver halide grains is 40% or less, and 70% or more of the total projected area of the silver halide grains is occupied by the spectrally sensitized silver halide grains each having a multilayer adsorption of dye chromophores on the surface thereof.

5. The silver halide emulsion according to claim 1, wherein the average thickness of all the

silver halide grains contained in the silver halide emulsion is 0.2 μm or less.

6. The silver halide emulsion according to claim 1, wherein a content of Ca or Mg in the silver halide emulsion is 2×10^{-3} mol to 4×10^{-2} mol per mol of silver of the silver halide emulsion.

7. The silver halide emulsion according to claim 1, wherein at least one of the dye chromophores is a cationic sensitizing dye.

8. A method of preparing, in a reaction vessel, the silver halide emulsion according to claim 7, wherein the method comprises adding, to the reaction vessel, the cationic sensitizing dye in the form of water-based dispersion.

9. The method according to claim 8, wherein the water-based dispersion substantially not containing an anionic surfactant.

10. The method according to claim 8, wherein the water-based dispersion substantially not containing an organic solvent.

11. The method according to claim 8, wherein the concentration of the cationic sensitizing dye in the water-based dispersion is 1 wt% or more.

12. A method of preparing, in a reaction vessel, the silver halide dimulsion according to claim 1, wherein the method comprises:

adding, to the reaction vessel, the modified

gelatin and

desalting a silver halide emulsion to which the modified gelatin is added,

wherein said adding the modified gelatin is conducted before said desalting.

13. A method of preparing, in a reaction vessel, the silver halide emulsion according to claim 1, wherein a content of an anionic surfactant in the reaction vessel immediately after the completion of adding all the dye chromophores is 0.45 g or less per mole of silver of a silver halide emulsion contained in the reaction vessel.

14. The method according to claim 8, wherein the water-based dispersion containing an inorganic salt.

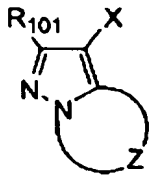
15. The method according to claim 8, wherein a silver amount of a silver halide emulsion in the reaction vessel at the time of adding the cationic sensitizing dye is 100 g/kg or more, and/or an amount of gelatin of the silver halide emulsion in the reaction vessel at the time of adding the cationic sensitizing dye is 90 g/kg or less.

16. A silver halide photosensitive material containing, in a light-sensitive silver halide emulsion layer, the silver halide emulsion according to claim 1.

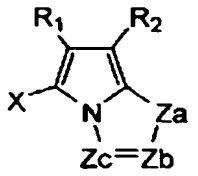
17. The silver halide photosensitive material according to claim 16, wherein the photosensitive material further containing a compound capable of

undergoing a one-electron oxidation to thereby form a one-electron oxidation product capable of releasing further one or more electrons.

18. The silver halide photosensitive material according to claim 16, wherein the photosensitive material further containing a compound represented by general formula (M) or general formula (U):



(M)



(U)

wherein in the general formula (M), R_{101} represents a hydrogen atom or substituent; Z represents a nonmetallic atom group required to form a 5-membered azole ring containing 2 to 4 nitrogen atoms wherein the azole ring may have a substituent, including a condensed ring; and X represents a hydrogen atom or substituent; and

wherein in the general formula (U), Za represents -NH- or $-CH(R_3)-$; each of Zb and Zc independently represents $-C(R_4)=$ or -N=; each of R_1, R_2 and R_3 independently represents an electron-withdrawing group having a Hammett substituent constant σp of 0.2 to 1.0; R_4 represents a hydrogen atom or substituent, when there are two or more R_4s in the general formula (U), these may be the same or different to each other; and X represents a hydrogen atom or substituent.